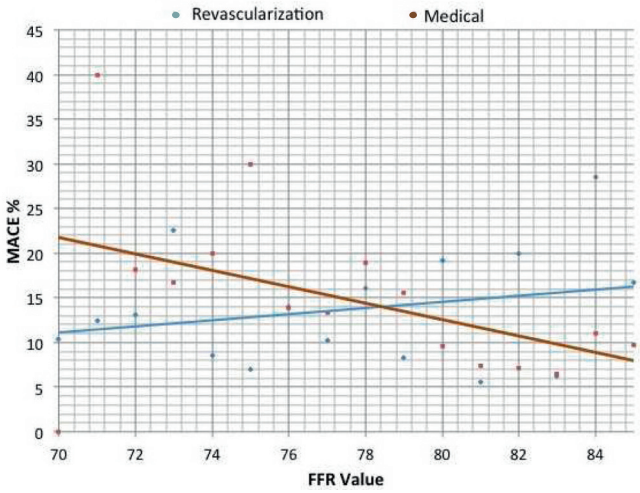
c) 0.81-0.85. Study endpoints was death, myocardial infarction and revascularization up to 5 years follow up.

Results Out of 17380 patients undergoing FFR measurement: 2781 (16%) patients presented lesions with FFR in the gray zone; 1459 were included: 449 treated with percutaneous revascularization (PCI) and 1010 with medical therapy (MT). Clinical characteristics were similar among patients treated with PCI or MT, with exception of more frequent male gender in PCI group [p=0.002]. Diameter stenosis and FFR value were lower in PCI group (p<0.0001). At 5-years, compared to PCI group, MACE was more frequent in MT group with FFR 0.70-0.75 (11 [21%] vs. 53 [12%], p=0.026), while no difference was observed in MT groups with FFR 0.75-0.80 and 0.81-0.85. Within the MT group, a progressive increase in MACE was observed in 3 FFR strata (FFR, 0.81-0.85: 58 [8%] vs. FFR, 0.76-0.80: 35 [13%] vs. FFR, 0.70-0.75: n=11 [21%], p<0.0001).

Conclusions Patients with stenosis located in proximal-mid coronary segments and FFR in the gray zone of 0.75-0.80 demonstrate a MACE rate that is still higher than than observed in patients above the 0.80 clinical threshold. These data suggest that FFR £0.80 is valid to guide clinical decision making.



Abstract 0043 – Figure

The author hereby declares no conflict of interest

0301

Impact of the FAME2 study on routine use of Fractional Flow Reserve (FFR). Results from 2454 FFR between 1999 and 2015

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Rationale and aim Introduced in early 2000, Fractional Flow Reserve (FFR) was initially validated for deferring percutaneous coronary intervention (PCI) when >0.80. After September 2012, FAME2 suggested performing PCI when FFR <0.80. The impact of the two indications on routine practice is poorly documented.

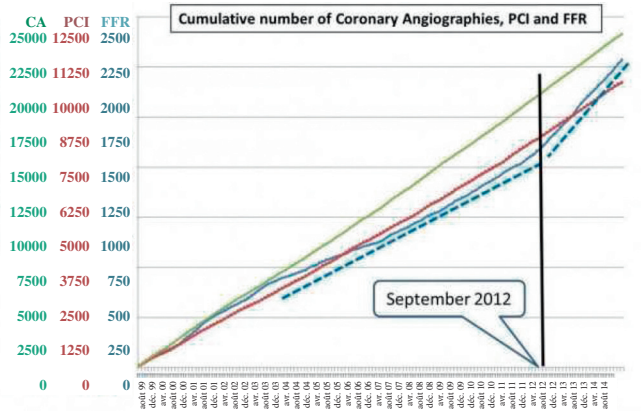
Methods Rate and indications of FFR use and decision for PCI was assessed monthly between April 1999 and Sept 2014 in a single center.

We calculated monthly the rates of FFR, coronary angiography (CA) and PCI.

Cumulative curves for CA, PCI and FFR we determined the according to time elapsed since 1999.

Results In a single center, 26629 CA, 12270 PCI and 2454 FFR were performed between 1999 and 2014. Monthly rates were 182 CA, 77 PCI and 14 FFR. The cumulative curves showed that the rates of CA and PCI were stable, with a near-perfect linear correlation for each time interval. Conversely, there was a change in the rate of FFR, the best spline point for the FFR use was found in September 2012. From 1999 to Sept 2012, the rate of FFR was 14/month and increased to 21/month after Sept 2012. There was no significant difference in the patient characteristics, indications for CA or center team or equipment between the 2 periods, but the rate of FFR/CA increased from 7.3 to 12%.

Conclusion Physicians performed more FFR after Sept 2012. This increase in routine use of FFR was only explained by the additional indication for FFR resulting from the publication of the FAME2 study.



Abstract 0301 – Figure

The author hereby declares no conflict of interest

0013

Feasibility, image quality and radiation dose of Coronary CT Angiography (CCTA) in patients with atrial fibrillation using a new generation 256 Multi-Detector CT (MDCT)

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Introduction To evaluate feasibility, image quality and radiation dose of CCTA in patients with atrial fibrillation (AF) using a new generation 256-MDCT.

Methods and materials Thirty consecutive patients (mean HR 103.8±52.2 bpm) with AF underwent CCTA on a 256-MDCT (Revolution CT, General Electric). Prevalence and impact on diagnosis of motion and step artifacts were independently evaluated by two experienced readers using a 3-point scale (0: no artifact; 1: artifacts without interference on diagnosis; 2: artifacts interfere with diagnosis) and percentage of assessable coronary segments was calculated. Contrast-to-noise ratio (CNR) and signal-to-noise ratio (SNR) were measured for quantitative assessment. Radiation dose was evaluated by calculating the mean effective dose (ED).

Results On a per-patient analysis, all the coronary segments were assessable in 28 (93%) patients. Only 3 coronary segments were not assessable in 2 patients due to motion artefacts resulted in a coronary segments assessability of 99.3% (453/456 segments) in the overall population. No step artifact was observed whereas motion artefacts (3-point scale score of 0.53±0.6) were infrequent and do not interfere with diagnosis. The mean CNR and mean SNR were respectively 13.3±4.6 and 13.0±3.3. ED remains low with an average of 3.3±2.5 mSv.

Conclusion CCTA is feasible in AF patients using a new generation 256-MDCT providing good image quality and low radiation dose in this challenging population.

The author hereby declares no conflict of interest